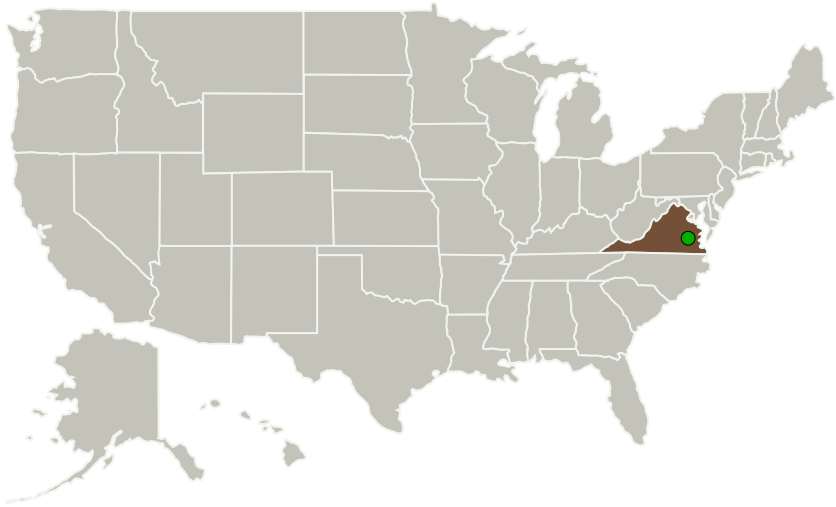
Advanced Coherent Lidar Receiver, Phase I

Completed Technology Project (2017 - 2017)

Project Introduction

An advanced wide bandwidth coherent lidar receiver is proposed that will enhance sensitivity, and reduce support hardware complexity. With built in signal processing, the receiver will provide high resolution spectral estimates for Doppler frequency extraction of weak signals in noise. If successful, the innovation will increase lidar system efficiency, reduce cost, size, weight and power.

Primary U.S. Work Locations and Key Partners



Organizations Performing Work	Role	Type	Location
Coherent Applications, Inc.	Lead Organization	Industry Minority-Owned Business	Hampton, Virginia
Langley Research Center(LaRC)	Supporting Organization	NASA Center	Hampton, Virginia

Primary U.S. Work Locations
Virginia

Advanced Coherent Lidar Receiver, Phase I Briefing Chart Image

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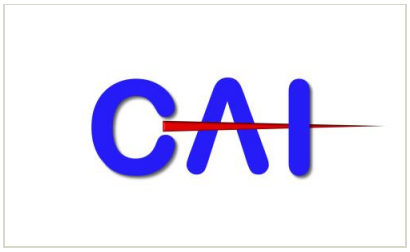
Images



Briefing Chart Image
Advanced Coherent Lidar Receiver, Phase I Briefing Chart Image *(https://techport.nasa.gov/image/133618)*

Organizational Responsibility

Responsible Mission Directorate:

Space Technology Mission Directorate (STMD)

Lead Organization:

Coherent Applications, Inc.

Responsible Program:

Small Business Innovation Research/Small Business Tech Transfer

Project Management

Program Director:

Jason L Kessler

Program Manager:

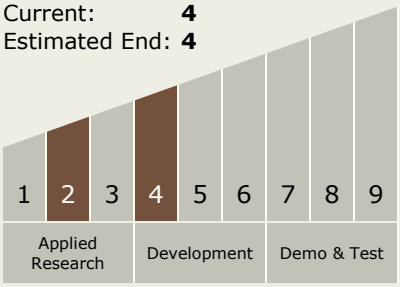
Carlos Torrez

Principal Investigator:

Diego Pierrottet

Technology Maturity (TRL)

Start: **2**
Current: **4**
Estimated End: **4**



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Technology Areas

Primary:

- TX08 Sensors and Instruments
  - TX08.1 Remote Sensing Instruments/Sensors
    - TX08.1.5 Lasers

Target Destinations

The Sun, Earth, The Moon, Mars, Others Inside the Solar System, Outside the Solar System